



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

### UHV gate valve, Series 108, DN 100 (ID 4'')

### Ordering No. 10840-JE14

#### Description

Flange	JIS 100
Actuator	pneumatic, double acting
Feedthrough	Bellows

#### Technical data

Leak rate	– Valve body	$< 5 \cdot 10^{-10} \text{ mbar ls}^{-1}$
	– Valve seat	$< 1 \cdot 10^{-9} \text{ mbar ls}^{-1}$
Pressure range		$1 \cdot 10^{-10} \text{ mbar}$ to 1.6 bar (abs)
Differential pressure on the gate		$\leq 1.6 \text{ bar}$
Differential pressure at opening		$\leq 30 \text{ mbar}$
Conductance (molecular flow)		$1740 \text{ ls}^{-1}$
Cycles until first service		50 000 (unheated and under clean conditions)
Temperature	– Valve Body	$\leq 250 \text{ }^\circ\text{C}$ open / $\leq 200 \text{ }^\circ\text{C}$ closed (bake-out max. 24h)
(Maximum values: depending on operating conditions and sealing materials)	– Actuator	$\leq 200 \text{ }^\circ\text{C}$
Heating and cooling rate		$50 \text{ }^\circ\text{C h}^{-1}$
Material (main components)	– Valve Body	AISI 304 (1.4301)
	– Mechanism	AISI 316L (1.4404), AISI 304 (1.4301)
	– Bellows	AISI 316L (1.4404, 1.4435)
Seal	– Bonnet	metal
	– Gate	FKM (Viton <sup>®</sup> ), vulcanized
	– Actuator	FKM (Viton <sup>®</sup> ), NBR
Mounting position		any
Volume of pneumatic actuator		0.11 l / 0.0038 ft <sup>3</sup>
Compressed air		4 – 7 bar / 58 – 102 psi
min. – max. overpressure		
Compressed air connection		G $\frac{1}{8}$ " (1/8" NPT for USA)

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Actuation time	- closing	1.2 s
	- opening	1.2 s
Weight		14.5 kg / 32 lbs
Behavior in case of compressed air pressure drop	- Valve closed	valve remains closed
	- Valve open	undefined
Behavior in case of power failure	- Valve closed	valve remains closed
	- Valve open	undefined

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